Development of Laser Beam Recorder for Next-generation Optical Disc

Tokyo, April 12, 2002— Hitachi, Ltd. (TSE: 6501) today announced that has developed a laser beam recorder (LBR) for next-generation optical disc using a DUV (Deep Ultra-violet) laser and will market it starting April 1. The LBR is expected to become a core device in the disc mastering process for phase change disc and high-density disc that is used for 12cm disc (the same size as standard CDs and DVDs) and is blue laser compatible.

Optical disc such as DVDs are recordable media for use with PCs and information appliances. As evidenced by the establishment of specifications for Blu-ray Disc that is for next-generation large-scale optical disc for video recorders, storage capacity and accuracy have increased. As a result, in the future, content creation for video, etc., will be conducted on next-generation optical disc rather than videotape or DVD video, and the LBR needs of these next-generation optical disc are expected to increase.

This LBR is used during the mastering[1] process in the manufacture of optical disc. Resist[2] is applied to the glass master disc, and during the mastering process, the resist undergoes an exposure process where it is irradiated by a DUV laser to create the "pit and wobble" structure. Thanks to its use of a DUV laser (short wavelength 257nm), high accurate auto-focus mechanism with a non-achromatic objective lens, optical axis correction mechanism, and loading of a friction-driven slider that offers high stability against disturbance, the LBR is compatible with the storage capacity and precision requirements of next-generation optical disc.

In addition, the device developed by Hitachi can be used with current DVDs and will be released with default settings set for compatibility with current devices. It will be possible to change the settings for compatibility with next-generation devices.

Hitachi will use this device to make demonstrated disc and continue to tune the LBR after new formats for next-generation optical disc are released.

[1] Mastering: Refers to the creation of the mold known as a stamper by applying resist to the glass master disc, exposing it and coating it.
[2] Resist: High-polymer material that reacts to light.

Description	Specification	Remarks
Recording laser	Ar ion SHG laser	Water cooled
Wavelength for recording laser	257 nm	
Disc diameter	Dia. 200 mm X Thickness 6 mm	
Control mode	CAL, CLV	

About Hitachi

Hitachi, Ltd., headquartered in Tokyo, Japan, is one of the world's leading global electronics companies, with fiscal 2000 (ended March 31, 2001) consolidated sales of 8,417 billion yen ($67.9 billion*). The company manufactures and markets a wide range of products, including computers, semiconductors, consumer products and power and industrial equipment. For more information on Hitachi, Ltd., please visit Hitachi's Web site at http://global.hitachi.com.

*At an exchange rate of 124 yen to the dollar.

Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.
